THE EFFECT OF SPORTS HYPNOSIS ON FLOW STATE AND SHOOTING PERFORMANCE OF HANDBALL PLAYERS

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CHAPTER I : INTRODUCTION

Sport psychology is a science that utilizes the techniques and principles of psychology specifically in physical activity settings (Cox, 1998). The still evolving field of sport psychology pulls from the research and knowledge of several other areas of psychology, including social psychology and psychophysiology, to help coaches and athletes understand the elements of themselves and those around them pertaining to sport, performance, and exercise. Currently, the field of sport psychology deals with many different issues that face athletes. Sport psychologists seek to work with athletes in areas such as team dynamics and recovery from injury in order to optimize their abilities. However, trying to understand and solve the issues facing athletes today is an important part of sport psychology. It is the question of why humans participate in sport in the first place that is becoming increasingly important. Participation in sport has been one of the most significant forms of human expression. For centuries, men and women sought to display their power through feats of speed and strength. Ancient athletes would undergo months of strict training in order to prepare for the early athletic games (Csikszentmihalyi, 1990). Following the same tradition, modern athletes also undergo such strict training. It is not uncommon for today's Olympians or even high school and college athletes to give their time and money over to grueling preparation for an upcoming competition. Athletes risk their bodies and their health daily in order to prepare to be the best in their area of concentration. They undergo daily pain and 18 sacrifices in the hope that it will all be compensated in one major competition. But the reality is that even though most athletes are willing to sacrifice their minds and their bodies for the gains of competition, most of them will never experience a world renowned win or celebrity status.

To understand sport hypnosis it is first necessary to define hypnosis and then move to a discussion of how hypnosis is used in sport psychology. From these definitions, a definition of sport hypnosis will evolve. And, although there are many definitions depending on the orientation of the hypnotist, a few definitions are of particular importance. According to the American Psychological Association's Div. 30 (Society of Psychological Hypnosis), "hypnosis is a procedure during which a health professional or researcher suggests while treating someone, that he or she experience changes in sensations, perceptions, thoughts or behavior". According to Robertson, one of the first definitions of hypnosis was proposed by James Braid, the Scottish physician and surgeon. Braid founded hypnotherapy and first discovered hypnosis in 1841. Originally, he used the term "Neuro-Hypnotism" or nervous sleep to describe hypnosis. Induced by a fixed and abstracted attention of the mental and visual eye, Braid thought that hypnosis created a peculiar state of the nervous system.

The grueling nature of sport begs the question of its purpose. If sport requires tremendous sacrifices for often little gain, why do humans still seek participation? This question is one that fuels current sport psychology research in the area of "flow." Csikszentmihalyi (1990) hypothesized that all humans seek optimal experience in life, which means that somehow, sport must offer some sort of optimal experience. He later developed a theory that referred to this

optimal experience as “flow”. His theory suggests that the reason most athletes continue in participation in sport is because of the flow experience.

The concept of "being in the zone" during an athletic performance fits within Csíkszentmihályi's description of the Flow experience. The theories and applications of "being in the zone" and its relationship with athletic competitive advantage are topics studied in the field of sports psychology. The concept of flow has gained increasing attention by researchers of various disciplines, since its introduction by Csikszentmihalyi (1975) The term “the zone” is frequently used in the sport psychology literature, outlining a state of high intensity, strong focus, superior performance (Young, 2000), and peak experience (Murphy & White, 1995), which is indicated by heightened awareness and intrinsic motivation
(Frederick-Recascino & Morris, 2004). Tolson (2000) described playing in the zone as “when the body is brought to peak condition and the mind is completely focused, even unaware of what it’s doing, an individual can achieve the extraordinary” (p. 38). Being in the zone is characterized by complete focus and merging of body and mind, which is indicated by optimal information processing reflecting automaticity. The execution of a skilled movement requires little conscious attention and processing which mirrors the state of mind when being in the zone or in flow (Cox, 2002; Csikszentmihalyi, 1990).

Mental imagery means visualization or mental rehearsal. Imagery means using all of your senses, for example, (feel, hear, taste, smell, see,) to rehearse your sport. Imagery helps to get the most out of training extensively to build their strength and eliminate their weaknesses. It helps an individual to compete more effectively. Imagery helps to regulate anxiety during the competition. It also helps athletes to 5 remain mentally tough and focussed during the whole process of training and competition. It helps them to speed up their progress and leads them to the top elite level. Elite athletes use imagery throughout their career as a tool for developing their sport skills. Use of imagery helps athletes to remain motivated along the way and helps them to maintain the vision of what they would achieve in their sport. During athlete‘s career when injury will occur which will cause them to miss the training sessions, these situations, athlete‘s can use imagery to help them maintain their abilities during the rehabilitation process. The imagery is beneficial when it is: 1. Vivid and detailed. 2. Incorporates all senses (see, fear, smell, hear, and taste) 3. Occurs in ―real-time‖. 4. Has positive focus. How to learn imagery: 1. Practice imagery. 2. Quality over quantity. 3. Set the scene. 4. Plan your imagery. Researchers have found time and again that imagery in sports is a powerful tool for athletes, and in turn improves their performance. To image and review an experience in mind, creating a picture about a task in hand, in training or in a competition. GulsumBastug, Ali Agilonu, Nuri Balkan (2017).Sports imagery is felt and practised in various ways. The study described the three main ways skills are imagined. Intrinsic imageryconsidering once a player in a task or action, extrinsic-imagery, by imagining another person performing a task or skill, and the third one, within a study focused on exercise and imagery and individuals. Attention on the other hand is the most important component. (Callery & Morris, 1997) have investigated imagery use to enhance self-confidence with a variety of participants also the effectiveness of imagery to enhance the performance of individuals.

Self talk – Many people are conscious of an inner voice that provides a running monologue on their lives throughout the day. This inner voice, or self-talk, combining conscious thoughts and unconscious beliefs and biases, provides a way for the brain to interpret and process daily experiences.Our self-talk can be cheerful and supportive or negative and self-defeating. Selftalk can be beneficial when it's positive, calming fears and bolstering confidence. Human nature, unfortunately, is prone to negative self-talk, including sweeping assertions like "I can't do anything right" or "I'm a complete failure."Some people believe they can credit their success to having a strong inner voice. In some cases, even a critical inner voice can push individuals to achieve by raising awareness of internal and external obstacles to achievement.
Over time, though, that type of self-talk can take a toll on one's confidence, fostering shame and limiting personal growth.

A large body of research, as well as individual experiences of athletes and coaches, shows that self-talk is effective for improving athletic performance. The effectiveness of self-talk on performance depends on situational factors, the athlete, and the features of self-talk itself. For instance, some researchers suggest that instructional self-talk might be more beneficial during training because it helps the athlete finesse their skill, whereas motivational self-talk might boost performance in a competitive setting. Self-talk may primarily act by reducing performance-related anxiety among athletes, particularly when it is positive. Moreover, selftalk has been linked to greater enjoyment, self-confidence, and higher perceived selfcompetence.

There is an active area of research geared toward identifying the most effective forms of selftalk. Though research shows that positive self-talk is most effective for performance, some individuals might improve more than others through negative self-talk due to individual differences in motivation and self-esteem. Additionally, in situations where the content of self-talk conflicts with the context or with an individual's beliefs about themselves, the selftalk might have no effect or even negatively impact performance. For example, a runner might have a positive mantra that they repeat, like "I've got this". However, if they are neck and neck with another runner, they might begin to doubt whether they trained adequately enough to outcompete them. If this doubt begins to conflict with their mantra, they might start to fall behind, and rather than boosting motivation to keep going, the mantra is rendered ineffective. An athlete who does not start doubting their training might instead use the same mantra to push themselves harder to win the race.

Many self-talk intervention studies train athletes to use self-talk that engages System 2, the slower but more intentional type of self-talk. As described above, some forms of self-talk might rely more on System 2, but it may be difficult for someone to interpret or regulate their self-talk if this slower, more intentional system is maximally engaged by other thoughts. For example, a runner who is tired and doubting their training during a critical moment in a race might start to over-analyze their training and what they could have done better leading up to the race, leaving few cognitive resources to re-appraise the current situation. As a result, they might not be able to engage in motivational self-talk that would otherwise help push through the fatigue. Thus, a number of factors determine whether practicing self-talk has a beneficial effect on performance in any given situation.

Handball is possibly the second fastest game in the sports world. Handball is as popular as soccer and has spread around the world and involved more than 15 million participants around the world. Handball was voted the best sport in the 2000 Olympic Games in Sydney. Sports lovers have a habit to watch basketball, baseball, tennis, and football. But the game handball combines all those games because of that it's become so popular in the world. The game has a unique future like energetic, skillful with a strategic style of playing which motivate us physically to play. The game handball will be invented by professor Carl schelenz at Berlin Physical Education School in 1919 but the evidence of handball shows that it came from Denmark and the rules of the handball will introduced by Holger Nielson. The rules finalized in 1897 the sports similar to handball will played in Greek at 600 B.C. in 130200 AD Romans played a game like a handball. During the middle ages, a ball game by the maids. Their honors and knights were the fore runner of this game. According to Rabelais in 1494-1533 in France they played a game similar to handball. In 1972, men handball and in 1976, woman handball will officially introduced in Olympic sports. It is an Olympic game played in around 160 countries in the world. The game will popular in European countries at the beginning and later it‟s become popular in worldwide. In 1928 the International Handball Federation (IHF) will formed and IHF will reconstructed in 1946. In 1936 the international level competition will conducted in the Berlin Olympics. The first world championship will held in 1938 it will played in football field with 11 players and the indoor game modified in 1960 onwards.

The handball team consists of seven players (two wings, three back court and one line player) and one goalkeeper. The handball court measuring with 20 meter in breath and 40 meters in length. Each team consists of 12 players among them only 7 players can play on a court and one player should be a goalkeeper. The player’s position of play depends on the possession of ball decided the position of play commonly attacking position or defending position. The goalkeeper should be different in uniform than teammates. Time duration for the match have two halves, two equal half with 30 minutes interval between with 10 minutes. (Ashok R. Lohar,1998). In 1928 the international handball federation will founded and it will modified in 1946. The first international competition will held at Berlin Olympic Games in 1936. The first world handball championship will held in 1938. Handball become a popular game in

Europe and they were dominating team that time, after 1990‟s Germany, France and Sweden teams became top teams in the world.The criterions such as selection of players and long term training helps to achieve top level performance in handball. The successful performance in handball depends on the basic abilities like speed, strength, power, endurance, flexibility, coordination and combination of speed and strength. In this sport players are becoming an athlete, inventive and also it helps us to become fit and healthy. Handball games need a dynamic, exciting and also need a physical fitness with stamina.

STATEMENT OF THE PROBLEM

The statement of the problem is to study the effect of sports hypnosis on flow state and shooting performance of handball players.

OBJECTIVES OF THE STUDY

The objectives of the study are :

1. To find out the effect of mental imagery on jump shot high in Handball.
2. To find out the effect of self talk on jump shot high in Handball.
3. To find out the effect of both mental imagery and self talk combined on jump shot high in Handball.
4. To find out the effect of mental imagery on flow state in Handball.
5. To find out the effect of self talk on flow state in Handball.
6. To find out the effect of both mental imagery and self talk (combined) on flow state in Handball.

RESEARCH QUESTIONS

The research questions are :

1. Is there any effect of mental imagery on jump shot high in Handball?
2. Is there any effect of self talk on jump shot high in Handball?
3. Is there any effect of both mental imagery and self talk combined on jump shot high in Handball?
4. Is there any effect of mental imagery on flow state in Handball?
5. Is there any effect of self talk on flow state in Handball?
6. Is there any effect of both mental imagery and self talk (combined) on flow state in Handball?

DELIMITATIONS

Since the study will be conceptualized with a very specific purpose for selected subjects, the research scholar confined this study to the following areas:

1.The study will be confined to male handball players of L.N.I.P.E.

2.The study will be delimited to the age ranging between 18-27 years.

3. The study will be delimited to 40 subjects (10 for imagery group, 10 for self talk group, 10 for combined group and 10 for control group).

4. The study will be further restricted to jump shot high in Handball only.

LIMITATIONS

1. Certain factors like geographic conditions, training, facilities, diet, daily routine habits, etc. that would have affected the results of the study, so it was considered as the limitations of the study.

2. Questionnaire has its limitations, any bias that might have entered into the subject on this account may be considered as a limitation to this study.

3. Athletes perception towards own behaviour may be different. It might be considered as another limitation of this study.

4. The impact of training or coaching technique of the coaches for various players might influence the answers given, which might be considered as another limitation of this study.

5. Life style of the athletes is beyond the control of the researcher. Socio-economic and religious factors, which cannot be controlled by the scholar, might affect the responses of the subjects; these are considered as the limitations for this study.

HYPOTHESIS

Based on research cited, books depiction, scientific facts available, and research scholar's understandings of this research study following hypotheses were formulated: It will be hypothesized that-

1. There may be a significant difference of mental imagery and self talk (combined) on shooting performance and flow state will be the most.

2. There may be a significant difference of mental imagery on shooting performance and flow state but not as much as there in combined effect.

3. There may be a significant difference of self talk on shooting performance and flow state but least from above two cases.

DEFINITIONS AND EXPLANATIONS OF TERMS

HYPNOSIS

"A procedure wherein changes in sensation, perceptions, thoughts, feelings, or behaviour are suggested." (Kirch and Lynn, 1995)

SPORTS HYPNOSIS

"Sport hypnosis as a form of mental training which can contribute to enhancing athletic performance." (Liggett)

MENTAL IMAGERY

"Imagery as a psychological activity which evokes the physical characteristics of and absent object (either permanently or temporarily absent from our perceptual field)" (Denis, 1985)

SELF TALK

"Self-Talk is a overt or covert personal dialogue in which the athlete interprets feelings, perceptions, and convictions and gives himself instructions and reinforcement." (Hardy, Gammage, and Hall, 2001)

FLOW STATE

"Flow State as an optimal and positive psychological state attained through deep concentration on the task at hand and involving total absorption." (Csikszentmihalyi, 1975)

HANDBALL

Handball is a team sport in which two teams of seven players each (six outfield players and a goalkeeper) pass a ball using their hands to throw it into the goal of the other team. A standard match consists of two periods of 30 minutes, and the team that scores more goals wins.

JUMP SHOT

The jump shot is one of the most important elements of handball as in the game, motor behaviour is performed in specific conditions with the presence of players of the opposing team and while adhering to the regulations.Point the non-throwing arm at the target. Pull the throwing arm toward the target leading with your elbow and your forearm and wrist following last and fast. Release the ball at the highest point of the jump and just in front of your head. Release the ball sharply downwards at the required target.

JUMP SHOT HIGH

The vertical jump shot is thrown with power and speed downward into the opponent's goal. The angle and the steepness of the ball's trajectory make it hard for the opponent or goalkeeper to stop.

It is a straight shot over the head while jumping while jumping the attacker tries to throw on goal over the defender. The advantage of this throw is the surprise movement and out structured view of the defender.

SIGNIFICANCE OF THE STUDY

The modern age of sports is the excellences in every perfection and purification of skill has got its immense importance and research in the field has added allow in excelling the performances of the present study maybe contribute to the following:

1. The findings of the present study may be determined as contributing factors to the performance of Jump shot high and flow state in Handball.
2. This study may be helpful to the physical education teachers, coaches, and Handball players to evaluate the Jump shot high and flow state.
3. The results of the study may help the Handball players and coaches in understanding of the sports hypnosis on jump shot high and flow state.

CHAPTER II REVIEW OF RELATED LITERATURE

(Mohammad ali Yazdanpanah et al., 2022), The purpose of this study was to see how beneficial hypnotic imagery was on the mental skills of rowing athletes in Tehran province. This study used a developed a semi-experimental approach with a repeated measures design and a control group. Tehran Province's boatmen were included in the study's statistical population in 2021. Due to the semi-experimental aspect of the study, the sample included 30 sailors (17 females and 13 males) who were randomly divided into two groups: A. control (15 people, including eight women and seven men) and B: experimental (15 people, including eight women and seven men) (15 people, including nine women and six men) The Mental Skills Questionnaire (OMSAT-3) was applied in this experiment. The study hypotheses were tested using univariate and multivariate covariance analyses. Data research revealed that hypnotic imagery has an advantage on athletes' mental skills and has resulted in better athletes' mental skills. According to the findings of this study, hypnotic imagery is an excellent way for boosting the mental skills of rowing athletes.

(Garzon Mosquera et al., 2020), Effects of mental preparation techniques based on imagery - hypnosis on flow states and athletic performance. PENSAR EN MOVIMIENTO: Revista de Ciencias del Ejercicio y la Salud, 18(1), 1-14. The present study aims to examine the effectiveness of psychological mental preparation techniques based on imagery or hypnosis on the state of flow, sports performance, and their relationship using the meta-analytic technique. A literature review was conducted in ten databases from August to October 2017, which resulted in 17 studies related to sports activities with pretest-posttest measurements. The Effect Size (ES) of mean difference was analyzed using a random model. A total of 53 ESs and 62 ESs were obtained for flow states and performance, respectively. A positive ES was found for the flow state (ES = .782, n = 52, $p < .001$) and for performance (ES = .339; n = 60; $p < .05$), and a positive relationship was verified between the two variables ($\rho = .312$, $p < .05$). The most relevant variables that moderate the effect size of the flow state and performance are age, years of sports experience, and sex. It is concluded that imagery is the most effective psychological technique to increase the state of flow and performance. Further research with a pure experimental design considering the multi-dimensional measurement of the state of flow is recommended.

(Muluken Derar, Dr. Sunil Kumar Konka, 2020) The main purpose of this study was to investigate the effects of imagery skills training in handball game penalty shooting. For this purpose, Hawassa city administration U-17 male handball projects were selected. To collect the necessary data, all total of 30 U-17 male handball project players and a coach were selected as participants of the study. The study used a pre-test post-test experimental research design and the data were collected using multiple methods. All the selected subjects participated in the designed imagery skills program for consecutive twelve weeks, three days per week and for 15 minutes per day. Pre and post training test was conducted to measure the variables of the study.

The collected data were analyzed using statistical package for social science (SPSS) version 20. Thus, paired-t test analysis and independent sample test were used to compare the mean difference of pretest and posttest and independent-t test to compare the mean of experimental and control group in relation to confidence interval consecutively. The level of significance was set at 0.05. After the twelve weeks training, the significant improvement was observed on posttest of experimental group. As a result, the mean difference value of paired test of pre and posttest is 1.96 and independent sample test the mean difference of experimental and control group is 3.6. Thus, the mean difference implies significance difference in pre and posttest of control and experimental group. The mean result of experimental group is pretest is 9.06 ± 0.79 whereas12.86 ± 0.63 posttest; it shows a 3.8 difference on experimental group of the study. This result indicates that the effective change was observed on experimental group than control group. Based on the findings of this study, i recommend that applying imagery, as part of the training, at different levels plays a vital role for the success of the team

(Sabrina Mattle et. al. 2020), This study investigated the effect of a single hypnosis intervention on shooting performance in a 10-meter air rifle competition. Eight shooting athletes from the Swiss national team participated in the experiment; an A-B-A single case study design was used, with 2 baseline measurements. The results suggest that for 3 athletes the hypnosis intervention had a small positive effect on their performance compared to all other measurements, 6 subjects had small improvements compared to 1 baseline measurement, and 2 subjects had a performance decrease. Data from the participants' subjective rating of the intervention effect and their satisfaction with it demonstrated feasibility and that all subjects experienced the hypnosis intervention as positive. Moreover, they commented that they felt calmer and more focused and self-confident when they began the competition. Therefore, it seems promising for shooting athletes to learn how to integrate hypnosis into their training regimens, but additional research is needed.

(Sang-Hyuk Park, Bong-Suk Lim, and Seung-Taek Lim, 2020) Self-talk is helpful in motivating shooting athletes and promoting effortful behaviour. This study aimed to examine how the degree and intensity of self-talk of shooting athletes during matches affects their actual internal motivation and careers. In particular, the primary objective was to determine the effects of the level and intensity of self-talk on the effort value, fun and interest, tension and anxiety, and competence of intrinsic motivation for different levels of achievement and athletic performance. One hundred seventy participants who were shooting athletes registered with the Korea Shooting Federation (national team, n = 55; high performance team, n = 62; general team, n = 53). The self-talk questionnaire was developed to measure the Test of Performance Strategies (TOPS). The intrinsic motivation scale developed and applicable to sports situations was used to measure the motivation of the shooting athletes. Significant differences were observed using MANOVA as well as the basic statistics of intrinsic motivation by self-talk. The intrinsic motivation self-talk was correlated to effort value, fun and interest, and competence. There was a significant relationship between shooting athletes' self-talk and intrinsic motivation. This study indicated that athletes using self-talk experienced more fun and interest,

and they perceived higher effort value and competence. Further, the multiple regression analysis revealed that self-talk affected the intrinsic motivational factors of effort value and fun and interest.

(Imran I Kagzi, 2017) This value of imagery in sports is widely acknowledged. The contribution of hypnosis to enhancing athletes' performance is also recognized, but the value of hypnosis in enhancing imagery has little recognition. To examine the effect of imagery technique using hypnotic state on performance, primary data has been collected through Martens questionnaire. Experimental research has been carried out to collect the data. The experiment has been performed on 22 cricket team players of two colleges of Surat and Bharuch city. The data has been analyzed by applying one sample t-test and regression analysis. From the analysis, it has been concluded that after the experiment of imagery technique using hypnotic state, the performance of cricket team players has been improved. It has been also found that imaging competing situation is more affective component on performance followed by practicing with others, watching team mate and practicing alone.

(Cameron Norsworthy , Paul Gorczynski & Susan A. Jackson, 2017) This systematic review aimed to examine the effects of flow training on flow states and performance outcomes in elite athletes. PRISMA guidelines were employed and a search on SPORT Discus, Psyc INFO, SAGE journals online, INGENTA connect and Google Scholar was completed in December 2015. Six pre-experimental studies using single subject designs and one experimental study, published between 2005 and 2014, found positive effects of psychological interventions improving flow states and performance, with four studies reporting significant or sizeable increases in flow states, and all studies reporting either quantitative or qualitative increases in performance. The studies targeted changes in flow through the use of imagery interventions (3), hypnosis (2), mindfulness (1) and managing pre-performance routines (1). Further rigorous, experimental research with larger sample sizes is required to establish conclusive relationships between flow states and performance. Research recommendations include interventions matched to theoretical dimensions of flow, and the use of multi-skilled and cognitive restructuring interventions. Furthermore, measures of flow intensity and frequency are advised to determine activity-specific requirements, as well as dimensional and global flow scores to further understand how specific interventions are influencing the occurrence of flow.

(Hadi Nojavan Alanagh and Ramina Atashgahian, 2017) The aim of this study was to compare the effects of motivational and cognitive imagery on Flow and 10m Air rifle shooting performance.15semi-professional men shooters were classified on a voluntary basis and divided into three groups of five people: 1) physical exercise, 2) physical exercise with cognitive imagery, 3) physical exercise with motivational imagery. Each group participated in 18 exercise sessions. Before and after intervention, participants did the shooting test and then completed the Flow state scale-2. Data analysis was done by one-way ANOVA. The results

showed that the flow and performance of physical exercise group had significantly higher improvements with motivational imagery in comparison to the other groups. Based on the results, it seems thatthe use of motivational imagery by coaches and sport psychologists in comparison with cognitive imagery will be leads to more effective increase in the Flow rate and performance of 10m Air rifle shooting.

(NILGÜN VURGUN , R. FERUDUN DORAK , MURAT OZSAKER , SEVIL ULUDAĞ , 2016) The aim of this study was to determine the flow states of elite handball players and to examine its effects in terms of several variables. 34 (19 female15 male) athletes aged 27.22± 5.44 competing in Turkish Handball Super League participated in the study and as a result of a total of 17 matches (men 10, women 7), 142 participations were included into evaluation. At the end of the matches, the athletes were given Personal Information Forms together with the form on their perceptions of the difficulty levels of the competition and the Dispositional Flow State Scale2, which was developed by Jackson and Eklund (2004) and adapted into Turkish by AJçı et al. (2007). As a result of the study, it was found that elite female handball players had higher flow experiences than elite male handball players. Flow experiences of handball players aged 30 and over were found to be significant at a higher level than those of handball players aged 30 and under; it was also concluded that the relationship between perception of difficulty and flow state, duration of game, gender and age are effective determiners.

(Comoutos Former Zourbanos Nikos, Antonis Hatzigeorgiadis, Bardas, Yannis Theodorakis, 2013) The present study examined the effects of instructional and motivational self-talk on handball performance using a novel task (non dominant arm) and a learned task (dominant arm) in primary school students. Participants were randomly assigned into two experimental groups (instructional and motivational) and one control group. The results revealed that for both tasks instructional and motivational self-talk groups improved their performance significantly in comparison with the control group and that for the non dominant arm instructional self-talk had a larger effect compared with motivational self-talk. The results suggest that instructional self-talk in the form of external focused cues may be more beneficial in the early stages of learning.

(Siggilis Nikos, Tsiggilis Nikos, Daroglou Garifalia, Ardamerinos Nikos, Partemian Stepan, 2003) Self-talk is one of the techniques for psychological intervention that athletes use in various situations. The purpose of this study was to examine the influence of an instructional self-talk technique on self-confidence and performance during the execution of a test in handball. The participants of this study were 46 physical education students who divided into

one experimental (which used the technique of self-talk with certain thoughts during the performance), and one control group. Each group performed 5 sets of throws to a target on the wall from a distance of 9m. The results showed no significant differences between the two groups either to the level of performance neither to the level of confidence. Furthermore, 63% of the subjects reported that they liked to use the technique of self-talk in each trial. The results are discussed in relation with the influence of confidence and the selftalk strategy to the performance, and the effects of the type of test, the number of the repetitions, and the level of the athletes.

(John Pates, Andy Cummings, Ian Maynard, 2002) This study examined the effects of hypnosis on flow states and three-point shooting performance in 5 collegiate basketball players. The investigation utilized an ideographic single-subject multiple baselines across subjects design combined with a procedure that monitors the internal experience of the participants (Wollman, 1986). The method of intervention utilized in this study involved relaxation, imagery, hypnotic induction, hypnotic regression, and trigger control procedures. The results indicated that all five participants increased both their mean basketball three-point shooting performance and their mean flow scores from baseline to intervention. There were no overlapping data points between the baseline and intervention for either performance or flow state. Additionally, each participant indicated that they had felt the intervention was useful in keeping them confident, relaxed, and calm. These results support the hypothesis that a hypnosis intervention can improve three-point shooting performance in basketball players and increase feelings and cognitions that are associated with flow.

CHAPTER III METHODOLOGY

This chapter describes the methodology and procedure of the study. It includes the selection of subjects, variables, collection of data and statistical techniques to be employed for analysis of data.

SELECTION OF SUBJECTS

For the study 40 male Handball players will be selected randomly from Lakshmibai National Institute of Physical Education. Therefore, it is considered that subjects possess reasonable level of technique of Jump Shot.

SELECTION OF VARIABLES

From researcher's own understanding of the problem and on the basis of discussion with experts, gleaned through the literature, For "The effect of sports hypnosis on flow state and shooting performance of handball players"

A. INDEPENDENT VARIABLES

a) Mental imagery
b) Self talk
c) Mental imagery and self talk

B. DEPENDENT VARIABLES

a) Flow state
b) Shooting ability (jump shot high)

CRITERION MEASURE

Jump Shot performance will be assessed through Zinn battery test,1981. This is a standard test which has validity coefficient of 0.76 and reliability coefficient of 0.82 to 0.89.

The flow state of the sport persons has been assessed through Dispositional Flow Scale-2 (DFS2) Jackson & Eklund (2004), consisting of 36 items. The flow scales assess nine dimensions of flow i.e. Challenge Skill Balance, Action Awareness Merging, Clear goals, Transformation of time, Unambiguous Feedbacks, Concentration on the task at hand, Sense of

control, Loss of Self-Consciousness, Autotelic Experience and with that all nine Total Flow was also taken. The scoring has been done through five-point scale. The data has been collected through offline mode. In addition to the performance data, information on the frequency and intensity of flow experience was assessed using the Flow State Scale questionnaire developed by Jackson and Marsh (2004). This 36-item instrument provides a quantitative measure of the nine dimensions of flow is taken from Csikszentmihalyi (1990). The internal consistency estimates for the nine DFS2 scales were alpha M = .85.

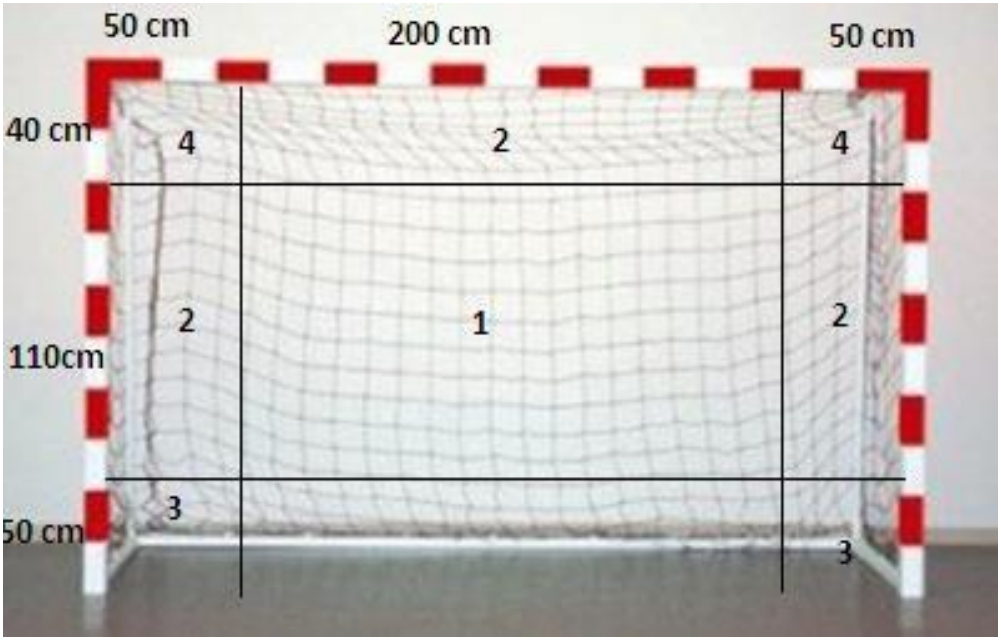
COLLECTION OF DATA

The performance of the subjects during the execution of jump shot, and flow state.
For the collection of data 40 male Handball players will be selected randomly from Lakshmibai National Institute of Physical Education. Total observations and collection of the data will be done on the same day, to obtain reliable measurement of the variables.

MEASUREMENT OF THE PERFORMANCE OF THE SUBJECTS

The subjects will get five trials for executing jump shot. The subject can take three steps before releasing a ball but the last step must be executed outside the free throw line (9 meter away from goal post). If a ball hits the court surface before it reaches the goal no point will be provided.

- Trial -5
- Highest score -20
- Lowest score -0



STATISTICAL PROCEDURE

1. MANOVA will be used to check the significance between the four groups.
2. All the data will be analysed with the help of SPSS version 26.
3. For testing hypothesis the level of significance will be set at 0.05.

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